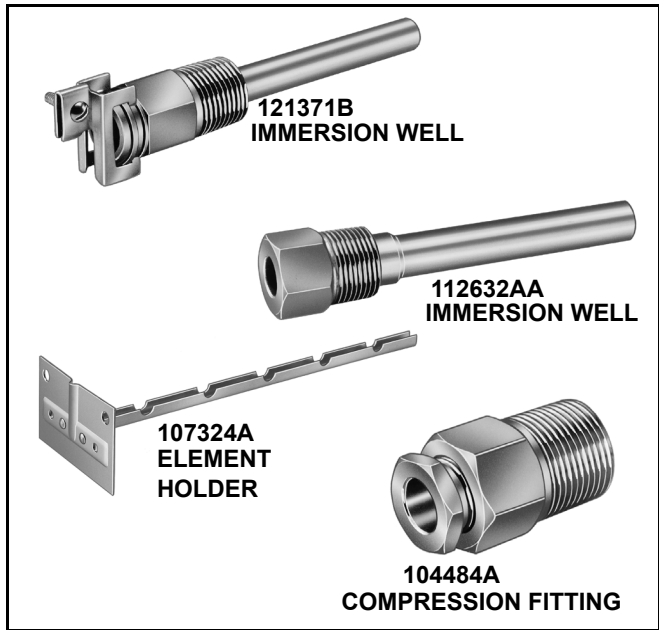


Immersion Wells and Compression Fittings

FOR TEMPERATURE CONTROLLERS

PRODUCT DATA



APPLICATION

Immersion wells, compression fittings and element holders are used with Aquastat® Temperature Controllers to hold the temperature sensing bulb in the controlled medium. Immersion wells and compression fittings also prevent leakage of the controlled medium.

FEATURES

- Immersion wells and compression fittings are available to fit a 1/2-14 or 3/4-14 NPT tapping with a range of insulation depths.
- Immersion wells and compression fittings are available in a variety of lengths and diameters.
- Immersion wells and compression fittings are available in a variety of materials, to suit the application. Materials include: brass, copper, stainless steel, mild steel or Monel.
- Element holders support the capillary and bulb or an averaging element in duct applications.
- Bulb shields protect the sensing bulb from sun and weather with the bulb installed outdoors.
- Accessories, including mounting clips, heat-conductive compound, waste nuts, a pipe strap and a well adapter, are available for mounting sensing bulbs in various applications.
- Immersion wells allow heat transfer while protecting the sensing bulb from contact with the controlled medium.
- Immersion wells permit removal of the sensing bulb for testing or replacement without draining the system.
- Compression fittings seal the boiler and allow bulb insertion directly into the controlled medium.

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SPECIFICATIONS

Models:

Immersion Wells: Allow heat transfer while protecting sensing bulb from controlled medium and seal off tapping to permit bulb removal without draining the boiler. Available in copper, stainless steel, mild steel and Monel. See Table 1 for copper. See Table 2 for stainless steel, mild steel and Monel.

Compression Fittings: Allow bulb insertion directly into the controlled medium with boiler draining. Can also be used to provide positive seal in duct applications. Available in brass and stainless steel. See Table 3.

Element Holders: Support bulb and capillary or averaging element in a duct. See Table 4.

Dimensions:

See Tables 1, 2, 3 and 4, and Fig. 1 and 2.

Temperature Ratings:

IMPORTANT

Do not exceed the maximum temperature rating of the controller element.

Wells:

Copper: 300°F (149°C) maximum.

Other Materials: Maximum temperature rating limits of the controller sensing bulb and capillary.

Capillary Compression Fittings: 250°F (121°C) maximum.

Element Holders:

311266D Bulb Holder: -40°F to +100°F (-40°C to +38°C).

Other Element Holders: Maximum temperature rating limits of the controller sensing bulb and capillary.

Maximum Pressure Ratings:

Copper Wells: 255 psi (1758 kPa) at 300°F (149°C).

Other Wells: 1500 psi (10,342 kPa) at 700°F (371°C).

Capillary Compression Fittings:

Water: 50 psi (345 kPa)

Air: 15 psi (103 kPa).

Accessories:

See Tables 5 and 6.

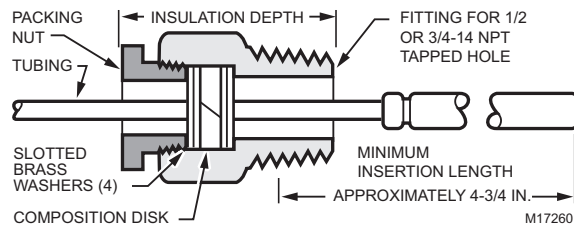


Fig. 1. Capillary compression fitting dimensions and components.

ORDERING INFORMATION

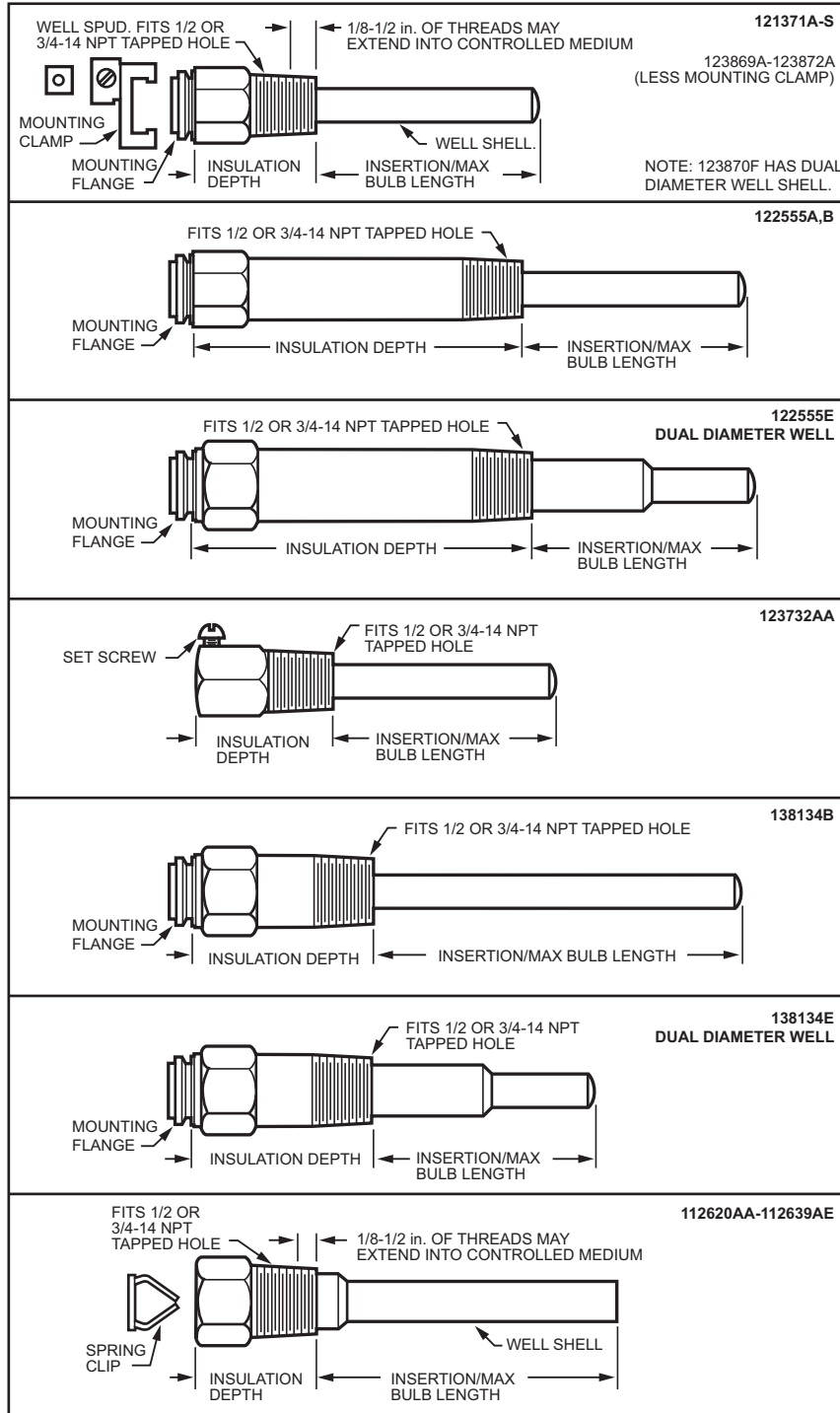
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M17259A

Fig. 2. Immersion well dimensions and components.

Table 1. Copper Immersion Wells.

Spud in in. x 14 NPT	Shell ID/ Bulb Diameter	Insertion/ Max Bulb Length	Insulation Depth	Capillary Diameter	Includes	Part Number	
1/2	3/8	3	1-1/2	5/64	121371 Mounting Clamp	121371A	
				—	—	123869A	
		3-1/2	1-1/2	5/64	—	Spud setscrew for armored capillary, plug	123732AA
					—	121371 Mounting Clamp	121371L
					—	121371 Mounting Clamp	121371P
	3-3/4	1-1/2	1/8	—	112721 Spring Clip	112620AA	
				—	Plastic sleeve on well tube	123869B	
	1/2	4-1/4	1-1/2	1/8	112721 Spring Clip	112622AA	
			4-1/2		112721 Spring Clip	112626AA	
	3/4	3/8	3	1-1/2	5/64	121371 Mounting Clamp	121371B
—					—	123870A	
3				5/64	—	121371 Mounting Clamp	121371M
					—	121371 Mounting Clamp, plastic sleeve	123171N
					—	—	123871A
4-1/2			—	—	Plastic sleeve on well tube	123871B	
				—	—	122555D	
3-1/2			1-1/2	5/64	—	Plastic sleeve on well tube	122555A
					—	121371 Mounting Clamp	121371Q
					—	—	138134B
4-1/2		—	—	—	Plastic sleeve on well tube	122555B	
				—	—	122555C	
3/8 + 5/8		3	2-1/4	—	Plastic sleeve on well tube	138134E	
			4-1/2		—	122555E	
1/2		4-1/4	1-1/2	1/8	112721 Spring Clip	112630AA	
			4			112634AA	
			8-1/4			1-1/2	112630AB

Table 2. Stainless Steel, Mild Steel, and Monel Immersion Wells.

Spud in in. x 14 NPT	Shell ID/ Bulb Diameter	Insertion/ Max Bulb Length	Insulation Depth	Capillary Diameter	Material	Includes	Part Number
1/2	3/8	3	1-1/2	5/64	Stainless steel	121371 Mounting Clamp	121371E
					Mild steel	112721 Spring Clip	112623AA
	1/2	4-1/4	1	1/8	Stainless steel	112721 Spring Clip	112624AA
					Stainless steel	112721 Spring Clip	112628AA
					Stainless steel	112721 Spring Clip	112632AA

Table 3. Capillary Compression Fittings.

Material	Spud	Maximum Bulb Diameter	Insulation Depth	Capillary Diameter	Part Number
Brass	1/2-14 NPT	1/2 in.	1-5/16 in.	5/64 in.	104484A
				1/8 in.	7617M
			1-1/2 in.	5/64 in.	104484C
			2 in.	5/64 in.	7617ABY
	3/4-14 NPT	11/16 in.	1-5/8 in.	5/64 in.	104484B
			1-1/2 in.	1/8 in.	7617P

Table 4. Element Holders for Duct-Mount Applications .

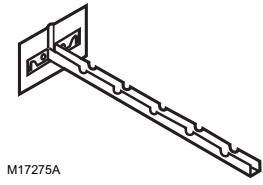
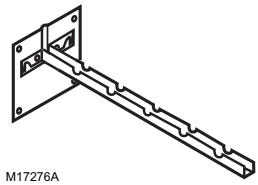
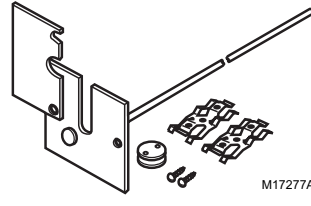
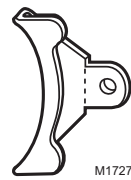
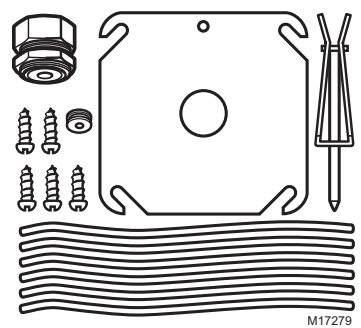
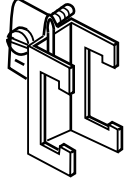


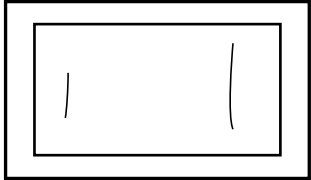
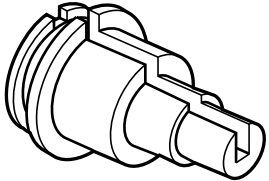
Application	Length	Plate Size	Description	Part Number
Bulb holders	8-5/8 in.	2-3/4 in. x 1-3/4 in.	Supports capillary and bulb in duct; mounting screws not included.	 M17275A 107324A
		2-3/4 in x 3 in.		 M17276A 131524A
	14 in.	3-1/4 in x 3-1/4 in.	Holds 1 or 2 elements in 0°F to 100°F air; grommet holds one 5/64 in. and one 1/8 in. diameter capillary; helps reduce airflow through opening in duct.	 M17277A 311266D
Averaging element holders	—	—	Mounting clip; use with grommet; mounting screws not included; one required per clip.	 M17271 314439
			Use with 1/2 in. EMT thinwall conduit where duct access is limited. Kit includes 4 in. (101 mm) cover plate, 1/2 in. EMT compression fitting, 3/16 in. (5 mm) rubber grommet, clamp assembly, wire ties and mounting screws.	 M17279 7640HX

Table 5. Immersion Well Accessories .

Description	Application	Size in in. (except where noted)	Part Number
Mounting clamp	Holds capillary in place on 123869A-123872A; 122554A,B; 12255A,B,D,E; and 138134B-F Immersion Wells.	1/2 or 3/4 in. well spud; 5/64 capillary	 <p>M17274</p> <p>121371AA</p>
Spring clip			 <p>M17288</p> <p>32002656-001</p>
	Holds capillary in place on 1122620AA-112639AB Immersion Wells.	1/2 in well spud; 5/64 capillary	104488
		1/2 in. well spud; 1/8 capillary.	112721
		3/4 in. well spud; 1/8 capillary.	112720
Heat-conductive compound	Improves heat conduction in well applications where bulb does not fit tightly.	4 oz. (118 ml)	 <p>M17281</p> <p>107408</p>
		Single application tube (1/2 oz)	 <p>M17282</p> <p>120650</p>
Well Adapter	Adapts well with setscrew on spud; for use with direct insertion bulb or 121371AA Mounting Clamp.		 <p>M17283</p> <p>124904</p>